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(71) Applicant:
Hewlett-Packard Company
Palo Alto, California 94304 (US)

(72) Inventor: Gannet, Ethan W.
Ft. Collins, CO 80525 (US)

(74) Representative:
Schoppe, Fritz, Dipl.-Ing.
Schoppe & Zimmermann
Patentanwälte
Postfach 71 08 67
81458 München (DE)

(54) Texel cache interrupt daemon for virtual memory management of texture maps

(57) A texture mapping computer graphics system includes a host computer (15) having a system memory (17) that stores texture data (S, T). A graphics hardware device (150), coupled to the host computer (15), renders texture mapped images, and includes a local memory (155) that stores at least a portion of the texture data (S, T) stored in the system memory (17) at any one time. A software daemon (160) runs on the processor (19) of the host computer (15) and manages transferring texture data (S, T) from the system memory (17) to the local memory (155) when needed by the hard-

ware device (150) to render an image. The software daemon (160) monitors use by the hardware device (150) of texture data blocks stored in the local memory (155). The daemon (160) also tracks the priorities of the textures stored in the main memory (17) so that lowest priority and least recently used texture data blocks in the local memory (155) are replaced with texture data blocks needed by the hardware device (150) to render images.

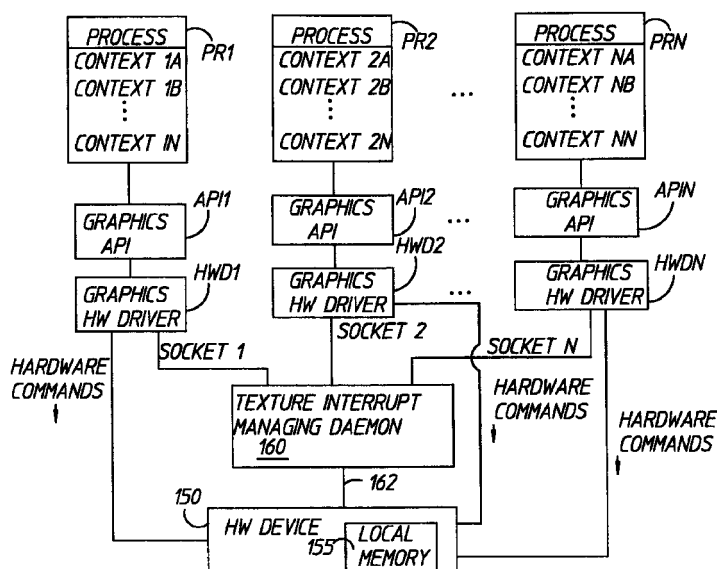


FIG 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 10 7382

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 438 195 A (PHILIPS ELECTRONICS UK LTD ;KONINKL PHILIPS ELECTRONICS NV (NL)) 24 July 1991	1,6	G06T15/10 G06F12/12 G06F12/08
X	* page 11, line 9-48 *	1,6	
Y	* page 11, line 41-48 *	2,7-10	

X	EP 0 447 227 A (HEWLETT PACKARD CO) 18 September 1991	1,6	
X	* column 7, paragraph 3 - column 8, paragraph 1 *	1,6	
Y	* column 7, paragraph 3 *	2,7-10	

Y	EP 0 454 129 A (HONEYWELL INC) 30 October 1991	2,7-10	
	* page 4, line 55-57 *		

Y	US 5 422 997 A (NAGASHIMA ICHIRO) 6 June 1995	2,7-10	
	* column 8, line 37-41 *		

			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G06F G06T
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 31 March 1999	Examiner Weber, R
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 96 10 7382

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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31-03-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0438195 A	24-07-1991	GB 2240015 A	17-07-1991
		DE 69128731 D	26-02-1998
		DE 69128731 T	16-07-1998
		JP 4211878 A	03-08-1992
		US 5495563 A	27-02-1996
EP 0447227 A	18-09-1991	US 5222205 A	22-06-1993
		DE 69130132 D	15-10-1998
		DE 69130132 T	28-01-1999
		JP 4222071 A	12-08-1992
EP 0454129 A	30-10-1991	US 5179638 A	12-01-1993
		CA 2038426 A	27-10-1991
		DE 69130545 D	14-01-1999
		JP 6020063 A	28-01-1994
US 5422997 A	06-06-1995	JP 6028485 A	04-02-1994